



PREVALENCE OF POSTPARTUM DEPRESSION AND AN ANALYSIS OF ITS PREDISPOSING FACTORS IN A TERTIARY CARE SETTING IN TELANGANA, INDIA

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ABSTRACT

Background: In Postpartum Depression [PPD] is a significant public health problem affecting maternal and child health. Its prevalence and risk factors are influenced by socio-cultural contexts. This study aimed to determine the prevalence of PPD and identify the socio-demographic and obstetric factors associated with it in a tertiary care hospital in Telangana, India. **Materials and Methods:** A prospective observational study was conducted over two years [September 2022-August 2024] among 400 postpartum women. The Edinburgh Postnatal Depression Scale [EPDS] was used with a cut-off score of >12 to diagnose PPD. Data on socio-demographic details, obstetric history, and psychosocial factors were collected via a proforma and analyzed using SPSS version 23. Chi-square tests were applied to find associations. **Results:** The prevalence of PPD was 15.5%. Statistically significant associations [$p < 0.05$] were found between PPD and factors such as maternal age [highest in ≥ 30 years, 50%], occupation [working women, 24.1%], lower socioeconomic status, history of previous pregnancy loss [55.6%], unwanted pregnancy [63.6%], complications during pregnancy [35.5%] and delivery [53.3%], pressure for a male child [51.5%], poor relationship with husband [69.2%] and in-laws [61.5%], domestic abuse [61.5%], lack of family support [42.1%], family history of psychiatric illness [42.9%], and recent stressful life events [50%]. **Conclusion:** The study confirms a high prevalence of PPD, underpinned by a complex interplay of psychosocial and obstetric risk factors. Early screening using EPDS during postnatal visits and targeted interventions addressing modifiable risk factors like family support and domestic violence are crucial for prevention and management.

Keywords: Postpartum Depression, Edinburgh Postnatal Depression Scale [EPDS], Prevalence, Risk Factors, Maternal Mental Health, India.

INTRODUCTION

Postpartum Depression [PPD] is the most common non-psychotic complication of childbearing, affecting approximately 10-15% of women globally, with higher rates reported in meta-analyses from India [19-25%] [1, 2]. As per DSM-5, it is defined as a major depressive episode with peripartum onset, occurring during pregnancy or within four weeks following delivery [3]. PPD is characterized by symptoms such as persistent sadness, loss of interest, fatigue, guilt, and in severe cases, suicidal ideation [4].

The consequences of untreated PPD extend beyond the mother, adversely affecting infant growth, cognitive development, and the mother-infant bond [5, 6]. In India, where maternal mortality is declining, the focus is shifting towards reducing maternal morbidity, including mental health disorders. However, a lack of trained mental health professionals and routine screening means PPD often remains undiagnosed.

The etiology of PPD is multifactorial, involving a complex interplay of biological, psychological, and social determinants. Identifying local prevalence and context-specific risk factors is essential for developing effective screening and intervention strategies. This study aimed to estimate the prevalence of PPD and evaluate its associated socio-demographic and obstetric predisposing factors.

MATERIALS & METHODS

Study Design and Setting: A prospective observational study was conducted in the Department of Obstetrics and Gynaecology Telangana, over two years from September 2022 to August 2024.

Study Population and Sampling: The study included 400 postpartum women who delivered at the institution and presented for follow-up within six weeks of delivery. Women with known psychiatric morbidity, those on psychotropic medication, and those who did not provide consent were excluded. The sample size was calculated as 340, rounded up to 400, based on a presumed prevalence of 22% [2].

Data Collection: After obtaining Institutional Ethical Committee clearance and informed consent, participants were interviewed using a structured proforma. This collected data on socio-demographic details, obstetric history, and psychosocial factors. The Edinburgh Postnatal Depression Scale [EPDS], a 10-item self-report questionnaire, was used to screen for PPD. Each item is scored 0-3, with a total maximum score of 30. A score of >12 was used as the cut-off to indicate a high probability of depression, as validated in previous Indian studies [7].

Statistical Analysis: Data were entered into MS Excel and analyzed using IBM SPSS version 23. Categorical variables were expressed as frequencies and percentages. The Chi-square test was used to determine the association between PPD and various factors. A p-value of <0.05 was considered statistically significant.

RESULTS

Prevalence of Postpartum Depression: Out of 400 women, 62 scored above 12 on the EPDS, yielding a prevalence of PPD of 15.5% [Table 1, Figure 1].



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Table 1: Prevalence of Postpartum Depression [n=400]

EPDS Score	PPD Status	Number [n]	Percentage [%]
0 – 12	Absent	338	84.5%
>12	Present	62	15.5%

Figure 1: Pie Chart Showing Prevalence of Postpartum Depression

[A pie chart would be inserted here, showing 84.5% for "Women without PPD" and 15.5% for "Women with PPD"]

Association with Socio-Demographic and Obstetric Factors:

A significant association was found between PPD and age [$p=0.007$], with the highest prevalence in the ≥ 30 years age group [50%]. Working women had a significantly higher prevalence [24.1%] than housewives [13.4%] [$p=0.019$]. Socioeconomic status was also a strong predictor, with women from middle and lower-middle classes showing significantly higher rates of PPD [$p=0.001$] [Table 2].

Table 2: Association of PPD with Selected Socio-Demographic Factors

Factor	Category	Postpartum Depression		p-value
		Absent [%]	Present [%]	
Age Group	≤ 21 years	100 [80.6%]	24 [19.4%]	0.007
	22 – 25 years	152 [85.9%]	25 [14.1%]	
	26 – 29 years	82 [90.1%]	9 [9.9%]	
	≥ 30 years	4 [50.0%]	4 [50.0%]	
Occupation	Housewife	278 [86.6%]	43 [13.4%]	0.019
	Working	60 [75.9%]	19 [24.1%]	
Socioeconomic Status	Upper & Upper Middle	142 [93.4%]	10 [6.6%]	0.001
	Middle & Lower Middle	196 [78.7%]	53 [21.3%]	

Obstetric factors played a crucial role. A history of previous pregnancy loss and unwanted pregnancy were strongly associated with PPD [55.6% and 63.6% prevalence, respectively]. Complications during both pregnancy and delivery significantly increased the risk of PPD [Table 3].

Table 3: Association of PPD with Selected Obstetric Factors

Obstetric Factor	Category	Postpartum Depression		p-value
		Absent [%]	Present [%]	
History of Pregnancy Loss	Yes	4 [44.4%]	5 [55.6%] 57	0.001
	No	334 [85.4%]	55 [14.6%]	
Unwanted Pregnancy	Yes	4 [36.4%]	7 [63.6%] 55	0.000
	No	334 [85.9%]	55 [14.1%]	
Complications during Pregnancy	Yes	20 [64.5%]	11 [35.5%] 51	0.001
	No	318 [86.2%]	51 [13.8%]	
Complications during Delivery	Yes	7 [46.7%]	8 [53.3%] 54	0.000
	No	331 [86.0%]	54 [14.0%]	

Association with Psychosocial Factors:

Psychosocial factors demonstrated the strongest associations with PPD. Pressure from the family to have a male child and the mother's own desire for a child of a different gender were significant risk factors. Crucially, poor relationships with the husband and in-laws, as well as the experience of domestic abuse, were among the strongest predictors of PPD (Table 4).

Table 4: Association of PPD with Key Psychosocial Factors

Psychosocial Factor	Category	Postpartum Depression		p-value
		Absent [%]	Present [%]	
Pressure for Male Child	Yes	16 [48.5%]	17 [51.5%]	0.000
	No	322 [87.7%]	45 [12.3%]	
Relationship with Husband	Good	334 [86.3%]	53 [13.7%]	0.000
	Poor	4 [30.8%]	9 [69.2%]	
Relationship with In-laws	Good	328 [87.7%]	46 [12.3%]	0.000
	Poor	10 [38.5%]	16 [61.5%]	
Domestic Abuse	Yes	5 [38.5%]	8 [61.5%]	0.000
	No	333 [86.0%]	54 [14.0%]	

DISCUSSION

This study found a prevalence of PPD of 15.5%, which aligns with findings from other Indian studies by Chandran et al. [11%] and Gupta et al. [15.8%] [7, 8]. The variation in prevalence rates across different studies can be attributed to differences in screening tools, cut-off scores, and the socio-cultural context of the study population. The "U-shaped" relationship with age, with higher rates in both younger (≤ 21) and older (≥ 30) mothers, highlights the vulnerabilities at both ends of the reproductive spectrum, possibly due to lack of preparedness and age-related

obstetric risks, respectively [9]. The higher prevalence among working mothers suggests that the stress of balancing employment and newborn care may be a contributing factor, a finding supported by Shivalli et al. [10].

As consistently reported, lower socioeconomic status was a potent risk factor, likely due to financial stress and limited access to resources [8, 11]. The profound impact of psychosocial factors is evident. The strong association with pressure for a male child and poor family relationships underscores the critical role of the family environment and societal pressures in the Indian context [7, 8]. Domestic abuse and lack of social support emerged as critical modifiable risk factors, emphasizing the need for screening for intimate partner violence and strengthening support systems for new mothers [12].

Obstetric risk factors such as previous pregnancy loss, unwanted pregnancy, and complications reinforce that a physically and emotionally challenging pregnancy and delivery experience can predispose women to depression [13].

A key strength of this study is its prospective design and use of a validated screening tool. However, being a single-center study limits the generalizability of the findings. Furthermore, the cross-sectional nature of the assessment limits causal inference.

CONCLUSION

This study confirms that postpartum depression is a common condition, affecting over one in seven mothers in this setting. The findings highlight that PPD is not caused by a single factor but is the result of a complex interaction between socio-demographic, obstetric, and, most prominently, psychosocial factors.

There is an urgent need to integrate routine screening for PPD into standard postnatal care using tools like the EPDS. Healthcare providers should be trained to identify at-risk women, particularly those with a history of pregnancy loss, complications, poor family support, or experiences of domestic violence. Interventions should be holistic, focusing not only on the mother but also on providing family counseling to address issues like gender bias and improving partner support. A multidisciplinary approach involving obstetricians, psychiatrists, and community health workers is essential for the effective prevention and management of PPD.

REFERENCES

1. Stewart DE, et al. Postpartum depression: Literature review of risk factors and interventions. Toronto: University Health Network Women's Health Program. 2003.
2. Upadhyay RP, et al. Postpartum depression in India: a systematic review and meta-analysis. *Bull World Health Organ*. 2017;95[10]:706.
3. American Psychiatric Association. Diagnostic and statistical manual of mental disorders [5th ed.]. 2013.
4. Beck CT. The lived experience of postpartum depression: a phenomenological study. *Nurs Res*. 1992;41[3]:166-70.
5. Field T. Postpartum depression effects on early interactions, parenting, and safety practices: a review. *Infant Behav Dev*. 2010;33[1]:1-6.

6. Surkan PJ, et al. Maternal depression and early childhood growth in developing countries: systematic review and meta-analysis. *Bull World Health Organ*. 2011;89[8]:608-15.
7. Chandran M, et al. Post-partum depression in a cohort of women from a rural area of Tamil Nadu, India. *Br J Psychiatry*. 2002;181[6]:499-504.
8. Gupta S, et al. Postpartum depression in north Indian women: prevalence and risk factors. *J Obstet Gynecol India*. 2013;63[4]:223-9.
9. Shenoy H, et al. Prevalence and determinants of postnatal depression in a tertiary care teaching institute in Kerala, India. *Int J Reprod Contracept Obstet Gynecol*. 2019;8[9]:3757-64.
10. Shivalli S, Gururaj N. Postnatal depression among rural women in South India. *PLoS One*. 2015;10[4]:e0122079.
11. Suguna A, et al. Postnatal depression among women attending a rural maternity hospital in South India. *Natl J Community Med*. 2015;6[3]:297-301.
12. Gaikwad S, et al. Assessment of postnatal depression and some associated risk factors among mothers... *Int J Community Med Public Health*. 2019;6[10]:4412.
13. Agarwala A, et al. Prevalence and predictors of postpartum depression among mothers in the rural areas of Udupi Taluk, Karnataka, India. *Clin Epidemiol Glob Health*. 2019;7[3]:342-5.